

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:)
Lester Benjamin JOHNSON et al.) Confirmation No.: 4118
)
Serial No.: 10/028,722) Art Unit: 3689
)
Filed: December 28, 2001) Examiner: Dennis William RUHL

Title: INTEGRATED VEHICLE SERVICE AND WARRANTY INFORMATION
DELIVERY DEVICE AND METHOD

DECLARATION PURSUANT TO 37 CFR §1.131

We, the inventors in the above-identified patent application, Lester Benjamin Johnson and Frank L. Newton, do each hereby declare that:

1. I have reviewed and understand the contents of the above identified patent application.
2. I am the inventor of the inventions described and claimed in the above-identified patent application.
3. Together with the other named inventor, I conceived the invention in the above-identified application at least as early as July 6, 1998.
4. A Product Requirement Specifications (PRS) document was created, showing the conception of the invention in the above identified application, at least as early as July 6, 1998.

A copy of this Product Requirement Specifications document is attached as Exhibit 1. The document shows the details of the invention as follows:

- a. A database of referenced vehicle diagnostic information searchable by vehicle identifying data. The PRS document states:
The host unit will be a PC-based system with a high speed communications docking system. This docking system will be designed to accept the Engine Analyzer module, the Scan Data Acquisition module, and the Gas module. When docked to the host unit, these data acquisition modules are used to obtain data that will be analyzed using intelligent symptom-based

diagnostic routines. When appropriate, these diagnostics can be obtained via a link to Manufacturer Technical Service Bulletins, pinpoint On-Board Computer diagnostic routines, and engine diagnostics that utilizes engine analyzer, gas module, and scan data input (when available).

See the 6th page of Exhibit 1 (labeled as page “1”), section 1.1. The PRS document also states:

Further, the host software will include a diagnostics engine which will analyze all incoming data (including OBC [*sic*, should read OBD] data when available) and generate focused diagnostic results. This diagnostic engine will also (when available) search for and display appropriate Technical Service Bulletins (TSBs) issued by the OEM for the vehicle being worked on.

See the 12th page of Exhibit 1 (labeled as page “7”), section 3.2.1. Thus, the Technical Service Bulletins, On-Board Computer diagnostic routines, and engine diagnostics that utilizes engine analyzer, gas module and scan data input can all be stored in databases, and need to be searchable by vehicle identifying data to chose the appropriate diagnostic.

b. A data input configured to receive vehicle diagnostic data directly from a vehicle diagnostic equipment operated by a mechanic. The PRS document details a PC-based system with a high speed communications docking system designed to accept diagnostic equipment such as an Engine Analyzer module as show above in section “a.” See the 6th page of Exhibit 1 (labeled as page “1”), section 1.1. It is further established by the PRS document that, “[t]his family of product will be utilized by technicians.” See the 8th page of Exhibit 1 (labeled as page “3”), section 2.1.1. Technicians in the automotive field are otherwise known as mechanics.

c. A database of service related vehicle information including warranty information. The relevant sections of the PRS document that specify this claimed feature are the same as those shown above in section “a.” See the 6th page of Exhibit 1 (labeled as page “1”), section 1.1, and the 12th page of Exhibit 1 (labeled as page “7”), section 3.2.1. Technical Service Bulletins can be stored in a database, and they contain service related vehicle information including warranty information, for example, a vehicle parts recall.

d. A microprocessor configured to compare the vehicle diagnostic data received through the vehicle diagnostic equipment with reference diagnostic information from the database and to determine a diagnosis based on the vehicle diagnostic information received from the vehicle diagnostic equipment as a result of the comparison and outputs at least one service related solution as a result of the comparison including indicating if the at least one solution is covered by a warranty.

The PRS document further specifies that “[t]he PC will be a Pentium-based unit,” thus showing the use of a microprocessor. See the 9th page of Exhibit 1 (labeled as page “4”), section 3.1.1.1.

The PRS document, in the section quoted above in section “a” of this declaration, shows that software analyzing the incoming data to generate a focused diagnosis, can do so through comparison with a database of reference diagnostic information, such as one that contains Technical Service Bulletins that can be displayed as at least one service

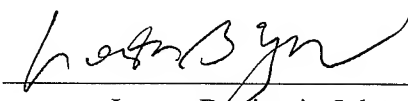
solution covered under warranty, based at least partially on the warranty information of the Technical Service Bulletins. See the 12th page of Exhibit 1 (labeled as page "7"), section 3.2.1.

4. I further submit that I understood that a means for entering configured to enter vehicle identification information into the system by a mechanic would be particularly suitable for a system for providing vehicle information for use in servicing a vehicle, such that the invention could be practiced for a particular vehicle at least as early as July 6, 1998.

7. I declare that statements made herein of my own knowledge are true and that all statements made on information and belief to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Date: 4/14/09


Lester Benjamin Johnson

Date: _____

Frank L. Newton

solution covered under warranty, based at least partially on the warranty information of the Technical Service Bulletins. See the 12th page of Exhibit 1 (labeled as page "7"), section 3.2.1.

4. I further submit that I understood that a means for entering configured to enter vehicle identification information into the system by a mechanic would be particularly suitable for a system for providing vehicle information for use in servicing a vehicle, such that the invention could be practiced for a particular vehicle at least as early as July 6, 1998.

7. I declare that statements made herein of my own knowledge are true and that all statements made on information and belief to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Date: _____

Date: May 20, 2009

Lester Benjamin Johnson

Frank L. Newton
Frank L. Newton

102727118.1

EXHIBIT 1

A division of SPX Corporation

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March 25, 2009

To: Distribution

From: Ben Johnson

Dist	Mike Alusick
	Russ Bailey
	Juan Castillo
	Don Orton
	John McCoy
	Ron Ortiz

Subject: Product Requirement Specification –EVA

Find attached a draft copy of the PRS for the EVA. Please take time to carefully review this copy, then complete and return the form below. When returning the comments form, feel free to attach additional pages.

I would like to receive all comments by [DATE].

Thank you for your prompt attention.

PRS Approval/Comments Form

PRS Title: _____ PRS Version/Date: _____

Name (Print): _____ Signature: _____ Date: _____

IMPORTANT: *Unless extenuating circumstances prevent a timely reply, failure to return this comment form within the next 10 business days may constitute automatic acceptance. Please notify the PRS author as soon as possible if an extension is required.*

[illegible]

AUTOMOTIVE DIAGNOSTICS

A division of SPX Corporation

Product Requirement Specifications

EVA

Version 0.1

Author:
Ben Johnson

Final Approvals Required

Mike Alusick Director, Product Management
Ken Reeves Vice President, North American Sales & Marketing
Don Orton Vice President, Engineering
John McCoy Vice President, Manufacturing
Ron Ortiz President
Juan Castillo Vice President, International

NOTICE!

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PRODUCT REQUIREMENTS SPECIFICATION

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1. Introduction

1.1 Purpose

The purpose of this document is to provide a preliminary description of the New Generation Vehicle Diagnostic system project known as EVA.

This diagnostic system will differ from current offerings in several ways, utilizing new hardware "data acquisition" technology and software technology. The host unit will be a PC-based system with a high speed communications docking system. This docking system will be designed to accept the Engine Analyzer module, the Scan Data Acquisition module, and the Gas module. When docked to the host unit, these data acquisition modules are used to obtain data that will be analyzed using intelligent symptom-based diagnostic routines. When appropriate, these diagnostics can be obtained via a link to Manufacturer Technical Service Bulletins, pinpoint On-Board Computer diagnostic routines, and engine diagnostics that utilizes engine analyzer, gas module and scan data input (when available).

When not docked to the host unit, the modules can be independantly connected to a Portable Display Module (PDM). The PDM combined with a module will emulate other high-end handheld tools. The unit will have display, graph and record capabilities (individual capabilites are dependant on the module installed

Because of this unique approach, this family of products will be available in several different sales configurations.

US/Canadian Sales Group

The US Sales Group will sell the "total shop solution" approach. This unit will have integrated diagnostics far superior to any current offerings by ATEG or any competitive offering known. The integration with Technical Service Bulletins, sophisticated Windows-based user interface and ability to run popular information system software packages, along with available options to display real-time scope waveforms, link to a dynamometer option, and other assorted options will give this unit many marketing advantages over the competitors offerings.

International Sales

This system will be designed with International Sales as an intended market, not as an adaptation of a US product. The Windows user interface will allow easier translations, the footprint of the cabinet will allow use in small garages, the engine hookup will be applicable to all known vehicles worldwide, the scan tool module will meet all International standards, and the diagnostic system will be designed to accomodate authoring locally as required. It is expected that International will sell both the "total solution" concept and the PDM Portable System approach, bundled with one or more modules.

OTC Distribution

The PDM and modular approach fits perfectly into OTC's "good, better, best" handheld approach, addressing the "best" system. The PDM coupled with the

appropriate module will have top of the line portable functionality, and the customer will have the added option of later purchasing the host unit less modules to complete the total diagnostic solution should they want to expand their diagnostic abilities.

1.2 Scope

The scope of this product includes hardware and software deliverables to meet the needs of each intended product offering. These products involve development of the PC-based Host and software, intelligent diagnostic software engine, the PDM and related software, and each data acquisition module.

To meet desired timelines and marketing plans, the product will be released in two phases. The first release product will meet all hardware requirements for the base unit. The defined options (dynamometer interface, acoustic test module, real-time digital scope, etc.) are not expected to be available at this time. Also, basic diagnostics will be available, but the integration of the TSB, OBC pinpoint diagnostics, and engine/gas analysis is not expected to be complete.

The second release, available six months after the initial release, will include the integrated OBC diagnostics and, assuming it will not be ready at phase one release, the availability of the optional real-time digital scope option.

In six month intervals software will be released that will allow further pinpoint diagnostics of other vehicle systems (ABS, SIR, Transmission, Suspension, etc.) (These diagnostics to be further defined by the Diagnostic Team/Intelligence Team after the feasibility study by the diagnostics group and the focus group/surveys are analyzed). There will be a marketing plan to sell subscriptions to diagnostic software to continue to fund further development/data purchasing.

1.3 Definitions

1.4 References

2. General Description

2.1 Product Perspectives

All console-type engine analyzers in use today are modifications to designs that were introduced in the 1980's. The available technology in vehicle design, electronic/computer design, and information systems, limited the ability to design a diagnostic system to meet the needs of all levels of technicians. Since these first designs, vehicle technology has changed dramatically. New ignition and fuel delivery systems, increased use of On-Board Computer systems to monitor engine functions and many other systems have resulted in a largely "adaptive" philosophy by the "total solution" builders. They have adapted their systems to meet the needs of the automotive repair industry. There has also been considerable breakthrough in technology for computer hardware/software development which has resulted in a

new family of products that concentrates on handheld test equipment (which ATEG aggressively competes in). The “big box” builders have not taken advantage of this technology/lower cost components, etc. All of these external forces have robbed the “total solution” diagnostic machine of market share.

The EVA family of products takes a “clean sheet” approach at these issues. First, the diagnostic system is not an adaptation of older technology. Rather, we will create an industry first by truly integrating on-board computer data with engine and gas data, to better diagnose engine problems. The net result is a more focused diagnostic result, instead of the “laundry list” diagnostics currently available from ATEG and competitive offerings. Second, (variable depending on diagnostic team/intelligence team reports) this product will offer pinpoint diagnostics of many diagnostic systems other than engine diagnostics (ABS, Suspension, etc.). Third, with the optional real-time digital scope add-on, the host becomes an extremely accurate and flexible lab scope for diagnosis of obc systems and anomaly detection in several vehicle systems. Fourth, because of the modular design and available PDM, this product will offer a high end family of handheld products so that customers can purchase as much or as little of their own diagnostic system as desired, with the knowledge that, if desired, they can later upgrade to the “total solution”. There will be many add-on options that will directly impact emission test areas and international requirements.

2.2 Product Features

2.3 Characteristics of the Product User

2.1.1. This family of product will be utilized by technicians with all levels of education and technical knowledge. The intelligent diagnostic engine and powerful, integrated data acquisition modules will be utilized by most technicians and national account businesses to help decrease repair times, increase customer satisfaction and, in the case of national accounts, give them a consistent level of accurate diagnosis throughout their locations.

2.1.2. The powerful assortment of “manual mode” tests will be utilized by more technical persons to analyze multiple inputs to determine causes of problems.

2.1.3. The real time anomaly detection scope option will be desired by those advanced technicians familiar with oscilloscope waveform diagnosis.

2.1.4. The PDM and associated modules will be utilized by technicians who do not feel that they can analyze the incoming data and make their own diagnostic decisions. The EVA PDM will be desirable also as it gives “road test” capability to the larger host unit and will allow playback of data through the host unit.

2.1.5. Most end users of this product expect a tool which can withstand very heavy use with little maintenance and do not expect to be burdened with requirements to take extra precautions in order to protect the equipment.

2.4 General Constraints

2.5 Assumptions and Dependencies

To meet the established base cost of the unit, it is assumed that we will be able to better control our purchasing of PC and related components, that we will be able to engineer the system to utilize fewer leads and that the leads used can be purchased at better prices than current leads.

2.6 Product Branding

In the US this product will be branded Allen; it is anticipated that in International markets there will be Bear and Allen brands available. The handheld PDM and associated modules will likely be sold under the OTC brand.

3. Functional Requirements

3.1 Hardware

3.1.1 Functions

3.1.11 Host

The PC will be a Pentium-based unit running at the fastest speed practical for the industry at time of release. It will have sufficient hard drive and memory (RAM) to support the ATEG and ATEG-approved software.

The host unit will contain a CD-ROM for software loading/updates and use with ATEG-approved third party software programs.

The host will contain a high speed data bus which will connect via a card which resides in the PC. This bus will be connected to docking ports located in the host, and to external feature connectors for all current and foreseeable options to be utilized with this product.

3.1.12 Engine Analyzer Module

The engine analyzer module will be a new design data acquisition device. As much as is practical, control and analysis of incoming data is controlled via the host software (console or PDM). Certain hardware may be included to allow specific test functions (to be determined and defined by the engine analyzer/host group). This module will reside either on the optional boom on the host unit, cabled to the host unit and set on/near the vehicle being tested, or cabled to the PDM and mounted in the hood area for road testing.

The engine analyzer module must utilize a minimum amount of leads to gather all data. All leads must be reviewed/redesigned as necessary to ensure easy and quick connection to all necessary connection points on the vehicle while reducing cost when possible. There must be a timing light.

The engine analyzer must have a data sample rate fast enough to obtain enough signal for the diagnostic software to use to provide accurate diagnosis (either comprehensive or “on the fly”). This specification must be reviewed and approved by the database team.

The data acquisition must be fast enough to allow waveforms to be displayed in “real time” and in many more voltage/time scale ranges than are possible with today’s unit. For ignition pattern display it has been determined that, when displaying a single cylinder waveform in a 5mS screen, we must be able to display at a resolution of 1024x768, with each pixel representing a sample. In “lab scope” mode we must have fast enough sample and refresh rates to compete with both the hand-held units available today and in the foreseeable future (for automotive service needs). Today the “fastest” waveform necessary to view (that the group could determine) is a crank sensor that displays 360 waveforms per crankshaft revolution. It is necessary to display this waveform accurately at speeds up to 6000 RPM. It is the intelligence groups opinion that a 1MHZ sample rate will accomodate the data acquisition needs. The display must be able to refresh fast enough for the user to identify detail in the waveform. It is understood that this may only be possible in a “full screen scope” display, and that when displaying other information the refresh rate may be slower. Hardware scaling of the oscilloscope should be as follows:

Hardware Scale	Typical Uses	Resolution
0-50KV	Ignition Secondary	200v
0-25KV	Ignition Secondary	100v
0-750v	Ignition Primary	3v
0-250v	Injector Peaks/Ignition Primary	1v
0-125v	Injector/Ignition Primary	.5v
0-25v	ECM/Other signals	.1v
0-2.5v	Ground Integrity/ECM component signals	.01v

The hardware scales will provide the resolution necessary for software scaling to accomodate all foreseeable range requirements. Software scaling determined to date:

0-50KV, 0-25KV, 0-750V, 0-500V, 0-250V, 0-125V, 0-50V, 0-25V, 0-10V, 0-7.5V,

0-2.5V, 0-.5V. It is required that all of these voltage scales have adjustable offset allowing for positioning of the waveform and for measuring of negative voltages.

It is also required that AC coupling be available as well as DC measurement.

Utilizing the high/low amprobes, the amperage scales to be measured are:

0-500A, 0-250A, 0-125A, 0-25A, 0-10A, 0-2.5A.

Utilizing the vacuum/pressure transducer (understanding that due to cost the pressure transducer may be an option) the scales required are:

0-30", 0-5", 0-60PSI, 0-10PSI.

The engine analyzer must be designed so that accuracy can be verified by a simple service routine and calibrated if necessary.

The engine analyzer must be capable of operating with conventional, electronic, distributorless and direct ignition systems, in either two or four cycle engines, with solid core or resistor spark plug leads, as defined by international requirements.

3.1.13 Gas Analyzer Module

The Gas Analyzer Module will be a miniature gas sampling device based largely on the Andros microbench used by OTC for their current handheld product. The host (or PDM) will be responsible for control of the gas module and display/record functions. This unit will reside in a docking bay in the host or connected to the PDM (to be determined if it mounts securely or is cabled to PDM). The gas bench must meet OIML (AUII approved) European standards for sales in International markets.

3.1.14 Scan Module

The Scan Module will be a data gathering device for On-Board Computer data. It will be OBDII compatible, must support ISO9141 protocol, and be capable minimally of interfacing with Opel, VAG, BMW, Renault. The future "CAN" communications protocol must be considered during development. The unit will be bi-directional and will have capability of reprogramming vehicle computers (when information available from OEM). It should be able to sample data fast enough to allow graphing of signals (as fast as the vehicle's computer is capable of communicating).

3.1.15 Portable Display Module

The PDM will be a powerful handheld device capable of interfacing with the gas, engine analyzer, or scan modules described above. It will have additionally a software port and printer port. This will enhance sales ability as a stand alone product or products integrated with the EVA host platform. This device will be capable of performing data display, data record, data graphing functions, basic diagnostics and (when used with engine analyzer module) oscilloscope functions. (further definition to be provided by the Scan Team). The unit will be capable of operating one module at a time; multitasking between modules is not a requirement.

3.1.2 Environment

3.2 Software

3.2.1 Functions

Software will be developed for the host and PDM to control the individual module display/control functions. Further, the host software will include a diagnostics engine which will analyze all incoming data (including OBC data when available) and generate focused diagnostic results. This diagnostic engine will also (when available) search for and display appropriate Technical Service Bulletins (TSBs) issued by the OEM for the vehicle being worked on.

The software will be responsible for controlling scope display ranges as follows:

0-50KV, 0-25KV, 0-750V, 0-500V, 0-250V, 0-125V, 0-50V, 0-25V, 0-10V, 0-7.5V,

0-2.5V, 0-.5V. It is required that all of these voltage scales have adjustable offset allowing for positioning of the waveform and for measuring of negative voltages.

It is also required that AC coupling be available as well as DC measurement.

The scope function will have “pull down” configurable “set windows” which will allow the technician to infinitely vary the voltage range and time/div scale, as well as trigger options “on the fly”. The scope trigger must be flexible and allow sensor triggering on the leading or trailing edge of the waveform and trigger on any input source. The scope must be able to display a minimum of 4 waveforms simultaneously. Ignition, amperage, and lab scope inputs must be displayable from the lab scope screen. We must be able to record one or all channels for a minimum of 10 seconds.

We must be able to display both waveforms and digital data (frequency, ms/div, voltage, etc.) simultaneously.

The host software must also include a tutorial module, designed to minimize the training requirements of this unit. This software should include theory as well as equipment operation in each intuitive module. In addition, context-sensitive help must be provided for each function provided. Where appropriate there must be hypertext links to further explanation and supporting graphics.

There must be a “demo” mode included in the host software. This demo software must be capable of guiding a user through a comprehensive diagnostic routine to an end result that will show all the features and benefits of using the automatic testing routines. Further, when accessing any “tool” in manual mode, there must be sample data displayed, waveforms, etc. to support the decision reached by the automatic demo test.

Host software will not be processor dependant. All timing functions, etc. will be designed around standards which do not change with processor speed.

3.2.2 Environment

3.3 User Interface

The host unit will use the Microsoft Windows 95 (or variation of) operating system. A user interface will be designed around this scheme that will allow the user to easily access any function of the system, and configure screens with the “tools” that are required for the function being performed. The interface must be designed so that the capabilities of Windows are controlled to keep users from inadvertently inducing operation problems as a result of a lack of familiarity with the Windows operating system.

The user interface must be designed, where practical, to be similar in look and feel to the current ATEG Windows product offerings (CCDWin). Intuitive Help messages must be provided so that a user knows what function will occur when activating any icon.

The interface must be designed to be compatible with a variety of pointing devices. It is anticipated that this unit will be available with a mouse or similar pointing device, and a light pen as an option.

3.4 Peripherals

3.4.1 Hardware

3.4.2 Software

4. Desired Enhancements

4.1 Hardware

4.1.1 Functions

4.1.2 Environment

4.2 Software

4.2.1 Functions

4.2.2 Environment

4.3 User Interface

4.4 Peripherals

4.4.1 Hardware

4.4.2 Software

5. Product Support

5.1 Product Updates

This product will be introduced in two phases, timed six months apart. The first update after the initial release will add the intelligent diagnostics engine to the software, and will make available the optional real-time oscilloscope with anomaly detection.

The marketing plan must include a subscription-based update plan. There will be an account to use a percentage of this revenue to re-fund the diagnostics development team/diagnostic purchasing requirements. Resources must be committed to deliver two updates per year with established release dates. It is expected that these updates will primarily include enhanced diagnostics including diagnostics for ABS, SIR, and other peripheral systems (to be further defined by the diagnostics/intelligence team after feasibility study and focus group/survey results are evaluated).

5.2 Product Security

The product software will utilize software security to prevent unauthorized copying/loading of programs or specifications.

5.3 Documentation

Documentation must be developed to cover operation of the various functions of the system. The documentation must familiarize the operator with the extensive help/tutorial functions built into the software.

Documentation must be developed without reference to specific branding, so that it may be utilized across the various brand names likely to be synonymous with this product.

5.4 Training Issues

A training program must be developed for this product that covers operation and benefits of marketing this product. The operational sections must include extensive guidance through the built in software tutorials and context sensitive help. There must also be a “waveform interpretation” supplement developed to support

diagnosis using the standard oscilloscope or the optional real time digital scope with anomaly detection.

5.5 Warranty

It is anticipated that this product will carry the standard product warranty; 12 months on host and peripheral hardware, 90 days on leads.

5.6 Product Service

The host unit will be designed for easy accessibility for service functions. The modules could be field serviced or depot (to be determined). The PDM will be depot-service (?).

Service manuals for the host and add on modules will be required.

6. Marketing Requirements

6.1 Competitive Product Demands

As defined, this family of product far surpasses all competitive offerings to date. It is expected that competitive offerings in the price/perceived feature range of this unit are purchased and extensively analyzed to determine strengths/weaknesses which may fine-tune the final specification of this product.

6.2 Product Market Timeline

The product release date is to be one year from project start.

6.3 Product Packaging

6.3.1 Physical Appearance of Product

6.3.2 Product Labeling

6.3.3 Transportation and Shipping Design Considerations

6.3.3.1 Domestic

This unit must be designed to be completely assembled and tested before shipping, then drop shipped to the end user location with a minimum of on-site preparation.

6.3.3.2 Export

6.4 Future Product Strategy

6.4.1 Product Support

Product support will be continued development of diagnostic routines/software enhancements where practical/hardware enhancements if

necessary throughout the product life. The subscription program will fund the development of updates.

6.4.2 Product Enhancements

6.4.2.1 Hardware Enhancements

Hardware enhancements, should they become necessary, will be limited to development of replacement modules to replace the modules introduced with the initial product, or more powerful PC components or peripherals. Software will not be PC-processor dependant.

6.4.2.2 Software Enhancements

Software enhancements, when appropriate, will be included in the biannual update and will be funded by the subscription fund.

6.5 Standard Cost Goal

Standard cost for the base unit will be \$4000.00

6.5.1 Required Features

The base platform will include the host cabinet, fastest PC processor appropriate to meet cost objectives, mouse (or similar) interface device, engine analyzer module, gas module, scan module, diagnostic software.

6.5.2 Desired Features

Features to be made available at additional cost include the real time digital scope with anomaly detection, TSB integration / enhanced diagnostic functions (to be further defined after diagnostic team feasibility study), boom, light pen pointing device, dynamometer interface, acoustic testing system, Diesel Testing module (displays diesel opacity testing, current per cylinder while cranking, timing, RPM).

6.6 Product Sales Life

6.6.1 Total Number of Sales

6.6.2 Sales verses Time Curve

6.7 Target Market

7. Appendixes

